

# Smoking and stroke

## What is a stroke?

Blood is supplied to the brain through blood vessels called arteries. A stroke happens when an artery to the brain is suddenly blocked or bleeds.<sup>1</sup> An artery can be blocked by a blood clot or by bits of plaque when that fatty material break off from the blood vessel walls. Blood supply is also disrupted if the artery breaks or bursts.<sup>2</sup>

The brain cells supplied by the artery cannot get the oxygen and nutrients they need due to lack of blood. This may result in part of the brain dying, leading to loss of brain function. This can affect movement, thinking, memory, personality, talking and swallowing.<sup>1,3</sup> Speedy treatment helps increase the chance of survival and a better recovery from stroke.<sup>4</sup>

## There are two types of stroke

- **Ischaemic stroke:** About 80% of strokes are caused by a blocked artery in the neck or brain.
- **Haemorrhagic stroke:** The rest are caused by bleeding into or around the brain.<sup>5</sup>

## How common is stroke?

Stroke is the third leading cause of death in Australia.<sup>6</sup> In 2021, around 8,500 Australians died as a direct result of stroke. In 2020, there were an estimated 39,500 strokes in Australia – more than 100 every day.<sup>7</sup>

In 2018, around 387,000 Australians aged over 15 years had ever had a stroke. Around three in 10 stroke survivors are aged under 65 years.<sup>7</sup> Almost 40% of stroke survivors have a disability resulting from their stroke.<sup>8</sup> The risk of stroke increases with age.<sup>7</sup>



## Smoking causes stroke

People who smoke are about twice as likely to have a stroke than someone who has never smoked. Smoking increases the risk for different types of stroke. The more you smoke, the higher your risk of stroke.<sup>9-12</sup>

People who smoke are more likely to have a stroke earlier than people who don't smoke. For example, people in their 60s who smoke are around three times more likely to die from a stroke than non-smokers of the same age.<sup>13</sup>

Women who smoke and use oral contraception are about four times more likely to have a stroke than women who use neither.<sup>2,14-16</sup> This risk affects women over the age of 35 years and it rises with age.<sup>16,17</sup>

You can reduce your risk of stroke by stopping smoking.<sup>10,18,19</sup> Other risk factors for stroke that can be controlled include high blood pressure, poor diet and lack of exercise, obesity, diabetes, too much alcohol and irregular pulse (atrial fibrillation).<sup>12</sup> The more risk factors you have, the higher your chances of having a stroke.<sup>20</sup> However, smoking by itself increases your risk of stroke.<sup>12,13</sup>

Breathing in other people's tobacco smoke (secondhand smoke) can also cause stroke.<sup>11</sup>

## How does smoking cause stroke?

There are over 7,000 different types of chemicals in cigarette smoke.<sup>18</sup> Once breathed into the lungs, many of these chemicals pass through your lung walls, into your bloodstream and are carried around your body.<sup>2</sup>

Chemicals from smoke affect your blood, making it thicker, stickier and more likely to form clots. They cause fatty material (plaque) to build up on your blood vessel walls faster. This process starts early and can be seen in people who smoke in their teens and early 20s. Over time, the plaque slowly narrows and blocks your blood vessels making it difficult for your blood to circulate. Bits of plaque can break off from your blood vessel walls and block one of your arteries. Also, the build-up of plaque makes your artery walls harder and less elastic, and more prone to break or burst allowing bleeding into the brain.<sup>2,18</sup>

## Stopping smoking reduces your risk of stroke

Your risk of stroke falls quickly within the first five years after you stop smoking.<sup>10,13,19,21</sup> After 20 years your risk of dying from a stroke is close to that of someone who has never smoked.<sup>13,22,23</sup>

The earlier you stop smoking, the better for your health.<sup>9,13</sup> If you stop smoking before the age of 35 years, your risk of stroke is the same as someone who has never smoked.<sup>9</sup>

Importantly, stopping smoking reduces the risk of stroke in people with high blood pressure.<sup>19</sup>

If you have already had a stroke, stopping smoking will lower your risk of having another stroke, heart attack or early death.<sup>24-26</sup> People who stop smoking after their first stroke or heart attack live on average five years longer than those who keep smoking.<sup>24</sup>

Cutting down the number of cigarettes you smoke each day, or switching to cigars or pipes, does not reduce your risk of early death very much compared to stopping smoking completely.<sup>27,28</sup>



## What happens when you quit smoking?

When you stop smoking:

- Within one day the level of poisonous carbon monoxide in your blood drops back to normal.<sup>29,30</sup> This means your blood can supply oxygen to your heart and muscles more easily.<sup>2,30</sup>
- After four weeks, your body is better at fighting off infections in cuts and wounds.<sup>31,32</sup>
- After eight weeks your level of good cholesterol has improved.<sup>33</sup> This helps slow down the build-up of fatty plaque on your artery walls.<sup>10,18</sup>
- Within three months your blood is less thick and sticky, and your blood flow improves.<sup>18, 29,34</sup>
- Within five years, there is a large drop in your risk for stroke.<sup>10,13,19,21</sup>
- After 20 years your risk of heart disease and stroke is close to that of a person who has never smoked.<sup>13,22,23</sup>

## Signs of stroke

The **F.A.S.T.** test is an easy way to recognise if someone is having a stroke.

Using the F.A.S.T. test involves asking three simple questions:<sup>35</sup>

**F** – Check their **FACE**. Has their mouth drooped?

**A** – Can they lift both **ARMS**?

**S** – Is their **SPEECH** slurred? Do they understand you?

**T** – **TIME** is critical. Call 000 if you see any of these symptoms.

There can also be temporary or mini strokes (where symptoms disappear within 24 hours), known as transient ischaemic attacks (TIA).<sup>1, 36</sup> After a TIA your risk of stroke is higher.<sup>5</sup> It is highest in the first few hours or days after a TIA. **Call 000** immediately even if the signs go away and you feel better. Your doctor will want to know about your signs and do a series of tests. Doing this may help prevent a stroke.<sup>36</sup>



## Help to stop smoking

The best way to **stop smoking** is to talk with Quitline and use stop smoking medications. These include prescribed tablets or [nicotine patches, lozenges, mouth spray, inhalator or gum](#). Your doctor or pharmacist can advise you on what would suit you.

If you are taking any medicines, talk with your doctor or pharmacist as they may need to look at your medicines before you stop smoking.

## Contact Quitline

Quitline is a welcoming, free and confidential counselling service. Quitline counsellors are experts at helping you gain the skills to break free from smoking or vaping, or both. We will help you build and keep up your motivation to quit and help you create a quit plan that works for you. We listen carefully and answer your questions without judgement and can support you throughout your quit journey. Quitline counsellors can also support you if you are using vapes to stop smoking and can help you stop vaping.

## There are many ways to contact Quitline:

- **Call 13 7848** Monday to Friday 8am to 8pm
- **Text 'call back' to 0482 090 634** (VIC, SA, WA, NT only)
- **Webchat** at [quit.org.au](https://quit.org.au) (VIC, SA, WA, NT only)
- **Facebook Messenger @quitvic** or **WhatsApp 61 385 832 920** (VIC, SA, WA, NT only)
- Ask Quitline to call you back **for free** at [quit.org.au/callback](https://quit.org.au/callback)

Aboriginal and Torres Strait Islander people can call Quitline and ask to yarn with an Aboriginal and/or Torres Strait Islander Quitline Counsellor if they wish, for Culturally sensitive support, delivered by mob, for mob.

Quitline has worked with people in the LGBTIQ+ community to make Quitline a safe and inclusive space. You can speak to Quitline in a language other than English: call 13 7848 and tell us you need an interpreter and we will call you back. We also use the National Relay Service with people with a hearing or speech impairment.

## Go online: [quit.org.au](https://quit.org.au)

Create your own quit plan to stop smoking or vaping with easy-to-find information. You'll find tips, distractions, tools and stories from people who quit.

Please note: this information is for general use only. Please consult your health professional for further advice.

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